reasoning a hemorrhage into the cochlea seems equally improbable.

Barany's syndrome complex is characterized by attacks of dizziness, labyrinth symptoms, and an inner ear lesion. Headache on the affected side behind the ear is a constant symptom. The pointing tests show a deviation, and often pointing after turning shows a loss of deviation to the inside of the hand on the affected side. The vestibule on the affected side usually is less irritable, and the hearing is often variable.

This case has no headache, no pointing deviations, the hearing is not variable, and the vestibules are equally irritable. It consequently does not fall within the group of cases which Barany has described as due to increased pressure of fluid in the posterior fossa.

In the December 1913 issue of the Archiv fur Ohren heilkunde, a report of the Deutcher Naturforscher und Arzte in Vienna quotes Beck as reporting a case of eighth nerve palalysis in multiple sclerosis, and Gemperz reports a case of multiple sclerosis in which the first symptoms were peculiar, recurring apoplectiform labyrinthine symptoms affecting one ear only. The report of these cases was so brief that it was impossible to determine whether they were similar to this case. The Neurological Clinic was unable to find any lesion in the central nervous system—possibly something may develop later.

In such a search as I have been able to make I can find no similar case, and I report it without attempting any explanation.

Discussion.

Dr. Cullen F. Welty: All I can say for this case report is that the case is worked up remarkably well. It shows how much can be done in arriving at something definite in regard to some of the ear lesions we frequently encounter. From the fact that nystagmus was not associated with the vertigo and dizziness, I am led to believe that the vertigo did not come from the internal ear but was due to an affection from which the patient suffered. I would account for the deafness by an infection of the cochlea from influenza, measles, mumps, or some one of the infectious diseases. To my notion this is more likely than the interpretation he puts upon it.

John J. Kyle, Los Angeles: Dr. Wintermute's report suggests to me the possibility that his case is one that might be classed as hysterical labyrinthitis. The fact that a nerve deafness exists, which is a real one, does not rule out the possibility that the periodical static changes are purely functional and hysterical in character. I have one case under observation, with a history of partial nerve deafness, suffering from periodical attacks of dizziness, and vomiting, upon sudden change of position, symptom complex of some vascular change in the semicircular canals, in which the symptoms of hysteria are positive. In this case there was a history of a fall and a blow on the head in the frontal region, in which there might have been a serious effusion into the labyrinth. Before the fall, however, sudden change of position would cause dizziness and sickness. Examination by a competent neurologist gave a negative finding, and X-ray examination shows no change in floor of skull.

Dr. Hill Hastings, Los Angeles: I reported at the last meeting of the State Society, several similar cases of so-called Meniere's disease, without any middle-ear changes. Similar cases were reported by Richard Lake in the British Medical Journal. The circulatory changes that likely do occur in the labyrinth are usually not susceptible of diagnosis.

Dr. Wintermute, in closing: Hysteria was first thought of, but the malingering tests showed actual deafness, and the last examination, five months afterwards, showing exactly the same status in the functional tests, led him to believe that it was not hysteria. He was acquainted with the cases reported by Dr. Hastings and Dr. Lake, but they did not seem to him to be of the same type.

BOOK REVIEWS

Electricity in Diseases of the Eye, Ear, Nose and Throat. With illustrations. By W. Franklin Coleman, M. D., M. R. C. S. Published by the Courier-Herald Press, Lincoln, Ill., 1912. Price $5.00.

This work for believers in electrical treatment of pathological conditions will no doubt be well received. It will be admitted by all scientific ear, nose and throat specialists that electricity, except in a few isolated instances, has no place in treatment. This volume would lead one to believe that it is a panacea for almost every ill. In this respect it is absolutely dangerous, for no sane man would use it as advised in chronic, purulent otitis media, glaucoma or cataract. To be brief, the book is a hodge-podge of non-scientific, unproven facts with a few grains of truth sprinkled in. The faddist will find plenty of pabulum in this work. H. Y. McN.

Bacteriology For Nurses. By Isabel McIsaac, R. N. Second Edition Revised. Pp. 176, with illustrations. New York. Macmillan Company, 1914. Price $1.25.

For both the student as well as the graduate nurse this book furnishes a comprehensive and instructive treatise on the subject of bacteriology. While it may be used in connection with instruction in the laboratory, yet, the subject is so treated that it may be readily used for reference purposes. The subjects treated cover the general field of bacteriology, giving an idea of the relations of bacteria to disease, the methods of examining and detecting their presence, as well as sterilization, disinfection and immunity. The tables and formulae are well selected; the illustrations when supplemented by work with the microscope suggest lines of further study. As a text book it would be of assistance to a nurse desiring to inform herself generally upon the subject of modern bacteriology. G. L. B.

A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M. D., Professor of Otology in the Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 12mo of 590 pages, 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.50 net.

The book impresses the reader as being concise, correct and sufficiently complete for the student or busy practitioner. There has been considerable elimination of non-essentials but the process has not been carried to the extent of omitting such obsolete methods as tonsil electrocautery, piecemeal tonsillotomy and through and through septum operations. The added chapter on formulas contains valuable hints on medical therapeutics and the subject of the accessory sinuses is given the increased prominence its importance demands. The section on the ear is especially worthy of praise. It contains numerous excellent and helpful engravings of dissections by the author, and is up-to-date with the latest advances in

the study of the labyrinth and in the pathology and surgery of the intracranial complications of Otic diseases. Dr. Gleason is to be congratulated on the possession of the happy faculty of presenting facts in a literary style that is at once entertaining, lucid and rememberable. G. W. C.

Nervous and Mental Diseases. By Joseph Darvin Nagel, M. D., Consulting Physician to the French Hospital of New York, Member New York Academy of Medicine, Honorary Member Societe Royal de Belique, etc., Physician to St. Chrysostom's Dispensary. New (2nd) edition, revised and enlarged, 12mo, 293 pages, with 50 engravings and a colored plate. Cloth, $1.00 net. (The Medical Epitome Series.) Lea & Febiger, Publishers, Philadelphia and New York, 1914.

This book of 282 pages is divided into five parts: Part I, Diseases of the Peripheral Nervous System; Part II, Diseases of the Spinal Cord; Part III, Diseases of the Medulla Oblongata; Part IV, Diseases of the Cerebrum and Cerebral Membranes; Part V, Diseases of the Mind.

It is stated in the preface that one of the chief aims of this small volume is to enable the student to make a quick review of the principal nervous and mental affections. At the end of each chapter follows a selected list of State examination questions. The discussion of each disease is necessarily brief and the book is not intended to supplant the larger and more complete text books on the subject. W. F. S.

DEPARTMENT OF PHARMACY AND CHEMISTRY.

Edited By FRED I. LACKENBACH.

NOVOCAINE (N. N. R.)

Novocaine is a synthetic chemical—the hydrochlorid of p. aminobenzolyldiethylaminoethanol. It crystallizes from alcohol in colorless needles possessing a melting point of 156° C. It can be heated without decomposition to 120° C. It dissolves in equal parts of cold water, the solution possessing a neutral reaction. In alcohol it dissolves in the proportion of 1:30. Caustic alkalies and their carbonates precipitate the free base from the aqueous solution in the form of a colorless oil which soon solidifies to a crystalline mass, but solution of sodium bicarbonate is miscible with solutions of novocaine without producing either precipitation or turbidity. The aqueous solution of the salt may be heated to boiling without decomposition and remains perfectly clear when kept for days in loosely-stoppered vials. It gives precipitates even in very dilute solutions with the usual alkaloidal reagents—such as potassium mercuric-iodide, picric acid, potassium iodide, etc. It is incompatible with alkalies and their carbonates and the alkaloidal reagents.

Novocaine is a local anesthetic similar in action to cocaine but much less toxic than cocaine, and said to be less toxic than other cocaine substitutes. When injected subcutaneously it is said to exert a prompt and powerful anesthetic action, but the effect is not sustained. This may be remedied by the simultaneous injection of the suprarenal alkaloid. Novocaine is apparently devoid of irritant properties. It is said to be useful in all cases in which cocaine is indicated. Novocaine does not come within the scope of the recently-enacted Harrison Act.

Novocaine appears on the market in the forms of base, the hydrochlorid, and the nitrate. Also in compressed tablets for the convenient preparation of solutions of various strengths, and in combination with epinephrine.

Novocaine base occurs in powder form and is soluble in oils. It is used in the preparation of oily solutions for nose and throat application—generally in a ten per cent. solution.

Novocaine nitrate is preferred where employed in combination with silver salts—with which it forms no precipitate—as in urethral irrigations, etc. The three per cent. solution is most commonly employed.

Novocaine hydrochlorid is used for the preparation of aqueous solutions which may be sterilized by boiling without decomposition or loss of activity. When epinephrine is added solutions should not be exposed to continued boiling since the active principle of the adrenals loses in activity by continued boiling.

For infiltration anesthesia: solutions of one-fourth to one-half of one per cent. are employed—prepared by dissolving 0.250 to 0.500 gm. novocaine in 100 cc. physiologic salt solution. To this may be added five to ten drops epinephrine solution (1:1000). The one-fourth of one per cent. solution, it is said, suffices to completely anesthetize the thick nerve trunks—as the sciatic nerve, in about ten minutes.

Solutions varying from one-half of one per cent. to two and a half per cent. are employed for local anesthesia—by injecting around the field of operation and by interrupting the conductivity of the nerve trunks which innervate the field of operation.

For lumbar anesthesia: from 2 to 3 cc. of a five per cent. (or from 1.25 to 1.8 cc. of a ten per cent.) solution may be employed—with the addition of five drops epinephrine (1:1000) solution to 3 cc. of the 5%, or 2 cc. of the 10% solution.

For instillations and injection solutions: one-half of one per cent. to two per cent. solutions may be employed—with or without epinephrine. Quantities up to 100 cc. of the weaker solution, it is said, may be safely employed.

In ophthalmology: one to five to ten per cent. solutions are employed—no dilation of the pupil resulting. The novocaine is dissolved in physiological salt solution to which may be added 6 to 8 drops epinephrine solution (1:1000) to each 10 cc.

In Rhino-Laryngology. for anesthetizing mucous membranes five to ten per cent.; and for the larynx and pharynx, ten to twenty per cent, solutions are recommended.

For internal use: novocaine, owing to its feeble toxicity, may be given in doses up to 0.5 gm. (7½ grains) to adults.

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